

NAMES _____

CHILD GENETIC VARIATION PROJECT

Why are even closely related siblings different both in genotype and phenotype? They differ because the variety of traits in a human population is very large and reproduction continually creates new combinations of traits.

What traits would your make-believe child have if both you and a classmate (your make-believe spouse) are heterozygous for each of the traits listed below? Illustrate how inherited traits are determined by chance with the following simulation:

PROCEDURE

1. Pair up into make-believe sets of parents.
2. Both parents, you and your partner, record your names on the data sheet.
3. On the data sheet, list the genotypes and phenotypes for each trait you determine.
 - Follow the directions in the “Guide for Determining Individual Traits” packet
4. Construct a picture of your child using all of the determined phenotypes.
 - First draw a rough draft on the front page of your packet
 - Then draw a good copy on white computer paper
 - Color it!
 - You are drawing the face of your child, toddler age (the body does not have to be included)
 - It should take up most of the paper
 - Put your child’s name on the paper as well
5. Either write a story about the life of your child OR create a collage of labeled pictures that illustrates the life of your child.
 - It must contain the child’s background, their interests, and goals you have for them
 - You should have at least 10 sentences/labeled pictures, depending on which option you pick
 - They should be school appropriate
6. If you do a story AND collage, you can earn up to 5 bonus points.

Note: You only need to turn in ONE data sheet, ONE picture, and ONE story or collage per group.

Wife and Mother: _____

Husband and Father: _____

Child’s Name: _____

DATA SHEET ON BACK

NAMES _____

DATA SHEET

TRAIT	CHILD GENOTYPE	CHILD PHENOTYPE
SEX		
FACE SHAPE		
CHIN SHAPE		
CLEFT CHIN		
HAIR COLOR		
HAIR TYPE		
WIDOW'S PEAK		
EARLOBE ATTACHMENT		
FRECKLES ON CHEEKS		
EYEBROWS I		
EYEBROWS II		
COLOR OF EYEBROWS		
EYES- DISTANCE APART		
EYES-SIZE		
EYES-SHAPE		
EYE SLANTEDNESS		
EYELASHES		
EYE COLOR		
MOUTH-SIZE		
LIPS		
DIMPLES		
NOSE SIZE		
NOSE SHAPE		
NOSTRIL SHAPE		